

EIA Project Narrative

Name of Applicant: **Gail Craddock**

Project Title: **Nurturing Our Senses Through Gardening**

Nurturing Our Senses Through Gardening is an authentic hands-on project to enable students in the orthopedically disabled class to access the curriculum standards to increase skills in ELA and science using auditory, visual, kinetic, and tactile methods during gardening activities.

This project will directly serve six to ten students in the orthopedically disabled self-contained class with ages ranging from four to eleven years old. Students are non-verbal with varying levels of abilities and disabilities in cognition, vision, hearing, and fine and gross motor skills. The students served in this project attend Palmetto Elementary in Williamston which is a small rural town in Anderson County. Palmetto Elementary is classified as a Title I school. Throughout the year, students in the general education classes, kindergarten to fifth grade, will also participate in the standard-based gardening projects with the students in the orthopedic class in order to provide lessons with age/grade appropriate, non-disabled peers.

By May 2007, the following goals will be met by the students in the orthopedically disabled class: 1) students will demonstrate an increase in ELA skills by mastering the objectives and 2) students will demonstrate an increase in science skills by mastering the objectives.

The performance objectives to meet the ELA goal are as follows: 1) by May 2007, 80% of the students will activate communication devices to identify at least twenty picture/ word cards, 2) by May 2007, 80% of the students will activate communication devices to correctly answer at least fifteen questions, and 3) by May 2007, 80% of the students will activate a sequence of at least three communication devices.

The performance objectives to meet the science goal are as follows: 1) by May 2007, 80% of the students will touch at least 20 requested items and 2) by May 2007, 80% of the students will activate communication devices to correctly answer at least fifteen questions.

From August 2006-May 2007, student progress will be assessed during each activity lesson using a curriculum-based checklist and teacher observation. The data from the first August activity will serve as the baseline. After each activity lesson, students will color his/her data graph with hand-over-hand assistance. Throughout the year, teacher analysis will determine the modifications needed to promote student progress. Data will also be used for evaluation purposes on the students' Individual Education Plan (IEP) which is reported to parents on a quarterly basis.

Activity lessons in this multi-sensory project will take place in the classroom and outside. With parent participation, the students will build planters of varying heights using the materials purchased. The planters will border the walkway (55 feet) leading from the parking lot to our entrance. Parents will be served lunch and refreshments during this collaborative building endeavor.

The use of communication devices in this project are crucial to enable non-verbal students to actively engage in every aspect of this project from the making of the shopping list to sequencing pictures in personal gardening journals. With a touch of his/her hand or arm, every student will be able to activate the devices which play the teacher recorded word or sentence.

Picture/symbols from the classroom Boardmaker program will be attached to the top of each device to provide visual connection along with auditory and tactile. The devices provide the students the means to verbally identify picture/word cards, sequence events or concepts, make shopping lists and a month-by-month planting schedule, and respond to questions. Acquisition

of content material can be assessed with the use of the devices. The interaction between non-disabled peers will also increase because these students can also make the recordings of information, hold the device for the student, and ask the questions. Due to the varying abilities and grade levels, each student would need his/her own device.

Throughout the year, students will plant a variety of plants providing hands-on multi-sensory standard-based lessons. Plants, planting tools and supplies, measurement tools (e.g. rain gauge, thermometer, weather vane) and plant books are necessary for students to apply the science concepts, increasing student knowledge.

After each activity lesson, digital pictures (printed on cardstock) will be added to the students' personal Talking Photo Books, students' personal gardening journal, and the culminating class gardening book. Recordings of information for the Talking Photo Books will be made by the teacher, assistants, or non-disabled peers. Rechargeable batteries are needed to ensure pictures can be taken continuously. With hand-over-hand assistance, students will glue pictures on cardstock and choose the materials to decorate the front covers of the class book, journals and Talking Photo Books. These projects, including the student made shopping lists and the poster-sized month-by-month calendars, promote sequencing skills, retelling, identification, and answering a variety of content questions. The class gardening book will be featured on the school news program with the students activating the communication devices to tell about our project. The entire gardening project will be chronicled throughout the year on our webpage.

All of the science and ELA curriculum standards were reviewed for all of the grade levels due to the wide range of grade levels in the classroom (pre-k to fifth). Each activity was matched with the correlating standards for each student's grade level. To meet students' needs and promote mastery of skills, all lessons incorporate auditory, visual, tactile, and kinetic activities.

EIA Project Overview Chart

**** Note: devices = communication devices with recorded words or sentences ****

Goal I : Students involved in this program will demonstrate an increase in ELA skills by mastering the objectives.			
Objective: 1) By May 2007, 80% of students will activate communication devices to identify at least 20 picture/word cards.			
Start Date and End Date	Activities to Achieve Objective	Evaluation Data and Measures (evidence of accomplishment)	Relevant Curriculum Standards ELA standards
1. Start: August 2006 End: August 2006	After the teacher reads and shows pictures of various plant boxes from the plant books, students will create a shopping list for building supplies using picture/word cards on devices. After the device is activated, student will attach picture/word card on poster board, with hand-over-hand assist. (visual, auditory, tactile, kinetic)	Curriculum-based checklist and teacher observation After teacher evaluates each activity, student will color his/her data graph with hand-over-hand assist. Students will activate the device with picture/word card attached	PK-R1.1 Begin showing an interest in reading-related activities...and recalling details by looking at pictures. K-R1.1 Demonstrate an interest in reading-related activities ...and recalling details by looking at pictures. 1-R1.6 Demonstrate the ability to recall details in texts read aloud. 2-R1.6 & 3-R1.5 Demonstrate the ability to recall details in texts. 4-R1.6 & 5-R1.5 Demonstrate the ability to analyze details in texts. PK-C1.7 Begin using oral language for a variety of purposes. K-C1.8 Continue using oral language for a variety of purposes. 1-C1.7 & 2-C1.7 Demonstrate the ability to use oral language for a variety of purposes. 3-C2.2 , 4-C2.2 & 5-C2.1 Demonstrate the ability to listen for meaning in conversations and discussions.

<p>2. Start: Sept 2006 End: Sept 2006</p>	<p>After looking at the variety of magazines and purchased plant books as reference, students will create a month-by-month planting schedule. After the device is activated stating the plant type with picture/word card attached, student will attach the card to the calendar. (made on poster board)</p>	<p>Curriculum-based checklist and teacher observation</p> <p>Students will activate the device with picture/word card attached</p> <p>After teacher evaluates each activity, student will color his/her data graph with hand-over-hand assist.</p>	<p>PK-RS2.1 Begin identifying pictures as sources of information. K-RS2.1 Continue identifying pictures and charts as sources of information. 1-RS2.1 & 2-RS2.1 demonstrate the ability to identify pictures, charts, tables of contents, and diagrams as sources of information. 3-RS2.1, 4-RS2.1 & 5-RS2.1 Demonstrate the ability to use a variety of resources to access information 1-R1.17 Begin using graphic representations such as charts, graphs, pictures, and graphic organizers as information sources and as a means of organizing information and events logically. 2-R1.1 Continue using graphic representations... 3-R1.14, 4-R1.15 & 5-R1.13 Demonstrate the ability to use graphic representations...</p>
<p>3. Start: Sept 2006 End: May 2007</p>	<p>Before gardening projects, students will create a plan. Students will activate device, with picture word card attached, to identify items needed for activity, the function of the item and the action to be taken place during the activity.</p>	<p>Curriculum-based checklist and teacher observation</p> <p>Students will activate the device with picture/word card attached</p> <p>After teacher evaluates each activity, student will color his/her data graph with hand-over-hand assist.</p>	<p>PK-RS3.1 Begin organizing and classifying information by constructing categories. K-RS3.1 Continue organizing.... 1-RS3.1, 2-RS3.1 & 3-RS3.1 Demonstrate the ability to organize.... 4-RS3.1 & 5-RS3.1 Demonstrate the ability to organize...by categorizing and sequencing.</p>

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Goal I : Students involved in this program will demonstrate an increase in ELA skills by mastering the objectives.

Objective: 2) By May 2007, 80% of students will activate communication devices to correctly answer at least 15 questions.

Start Date and End Date	Activities to Achieve Objective	Evaluation Data and Measures (evidence of accomplishment)	Relevant Curriculum Standards ELA standards
1. Start: August 2006 End: Sept 2007	Students will answer questions about the gardening activity as each one is completed. The answers will be included in the students' personal gardening journal and the culminating class gardening book.	Curriculum-based checklist and teacher observation After teacher evaluates each activity, student will color his/her data graph with h/h assist. Students will activate the device to correctly answer question.	PK-C2.3 Begin listening for meaning in conversations and discussions. K-C2.3, 1-C2.4 , 2-C2.3, 3-C2.2, 4-C2.2 & 5-C2.1 Demonstrate the ability to listen for meaning in conversations and discussions. PK-RS3.2 Begin organizing information on the basis of observation. K-RS3.2 & 1-RS3.2 Continue organizing information on the basis of observation. 2-RS3.2, 3-RS3.2, 4-RS3.2 Demonstrate the ability to organize information on the basis of observation. K-R1-10 Begin drawing conclusions and making inferences. 1-R1.11, 2-R1.10, 3-R1.9, 4-R1.10, 5-R1.9 Demonstrate the ability to draw conclusions and make inferences.

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Goal I : Students involved in this program will demonstrate an increase in ELA skills by mastering the objectives.			
Objective: 3) By May 2007, 80% of students will activate a sequence of at least three communication devices with digital pictures attached.			
Start Date and End Date	Activities to Achieve Objective	Evaluation Data and Measures (evidence of accomplishment)	Relevant Curriculum Standards ELA standards
1. Start: August 2006 End: Sept 2007	After gardening activities, students will activate the devices to retell and sequence events that they just completed. The digital pictures, printed on cardstock, will then be placed in the students' Talking Photo Books and inserted on class webpage to provide a continuous update.	Curriculum-based checklist and teacher observation After teacher evaluates each activity, student will color his/her data graph with hand-over-hand assist. Students will activate a sequence of three devices.	K-C1.10 Begin telling and retelling stories and events in logical order. 1-C1.9 & 2-C1.9 Demonstrate the ability to retell stories and events in logical order. 3-R1.14, 4-R1.15, 5-R1.14 Demonstrate the ability to use graphic representations such as charts, graphs, pictures, and graphic organizers as information sources and as a means of organizing information and events logically. 3-R1.11, 4-R1.12 Demonstrate the ability to determine cause and effect. 5-R1.11 Demonstrate the ability to analyze cause and effect. K-C1.11 Begin using visual aids such as pictures to support and extend his or her meaning in oral presentations. 1-C1.10 Continue using visual aids such as pictures to support and extend his or her meaning in oral presentations. 2-C1.10, 3-C1.9, 4-C1.9, 5-C1.8 Demonstrate the ability to use visual aids, props, and technology to support and extend his or her meaning and enhance his or her oral presentations. PK-C1.7 Begin using oral language for a variety of purposes.

EIA Project Overview Chart

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Goal 2: Students involved in this program will demonstrate an increase in science skills by mastering the objectives.

Objective: 1) By May 2007, 80% of the students will touch at least 20 requested items.

Start Date and End Date	Activities to Achieve Objective	Evaluation Data and Measures (evidence of accomplishment)	Relevant Curriculum Standards Science standards
1. Start: Sept 2006 End: May 2007	During the gardening activities, students will touch a variety of items to do the following tasks: sort, classify, identify, and assist using gardening tools and measurement tools. For example, plants will be measured for growth, parts of plants identified, colors of plants will be grouped for planting, gardening tools will be used for planting and maintenance, thermometers and rain gauges used for weather reporting.	Curriculum-based checklist and teacher observation After teacher evaluates each activity, student will color his/her data graph with hand-over-hand assist. Students will touch requested items.	K-I.A.2.a. , 1 st -I.A.2.a., 2 nd -I.A.2.a., 3 rd -I.A.2.a., 4 th -I.A.2.a., 5 th -I.A.2.a. Compare, sort, and group concrete objects according to observable properties (3 rd -5 th ...according to two attributes). K--5 th -I.A.2.b. Arrange objects in sequential order. K-I.B.1.b, 1 st -I.B.1.b., 2 nd -I.B.1.c, 3 rd -I.B.1.c. Use simple equipment to gather data and extend the senses. 4 th -I.B.1.c. Select and use appropriate equipment and tools to gather data and extend senses 5 th -I.B.1.c. Use appropriate tools and techniques to gather, analyze, and interpret data. K-II.A.1.a. Observe and describe how living things change as they grow. b. Investigate and identify the natural resources that living things need to survive. K-II.B.1.b. Observe and identify structures that are common between plants and animals and their offspring. K-III.A.2.a. Compare a variety of soil samples. b. Sort soil samples by a single attribute. K-IV.A.1.a. Examine, describe, and compare physical properties of a variety of materials. 1 st -II.A.2.a. Identify the parts of a plant

<p>1. continued Start: Sept 2006 End: May 2007</p>			<p>1st-III.A.1.b. Identify that the sun is a star and is the source of heat and light for Earth. 1st-IV.A.2.a. Measure length, mass, and temperature of various materials 1st-IV.A.2.b. Sort objects and materials based on a single attribute. 1st-IV.B.1.a. Investigate the effect of a push or a pull on the position and motion of common objects. 2nd-III.A.2.a. Measure and record temperature in both degrees. 2nd-III.A.2.b. Measure and record precipitation. 2nd-III.A.3.a. Measure length, mass volume, and temperature of various materials 3rd-II.A. 1.b. Select and describe an appropriate habitat for a plant or animal. 3rd-II.B.1.b. Record and describe the growth and development of a specific plant or animal over time. 3rd-III.A.1.c. Classify similar earth materials according to their physical properties. 3rd-III.A.2.a. Compare the effects of heat from the sun on various earth materials. 3rd-III.B.1.a. Investigate and describe push and pull involved in simple machines. 3rd-III.B.1.d. Observe and identify examples of simple machines found in the school, playground, home, and work environment. 4th-II.A.3.a. Identify and describe characteristics and behaviors that are inherited, e.g. flower color 4th-III.A.2.e. Identify safe ways to observe the sun. 4th-III.B.2.a. Measure and collect daily weather data using meteorological tools 4th-IV.A.2.a. Investigate and compare the different pitches of sound produced by changing the size, tension, or amount of the vibrating material. 5th-I.C.1.a. Identify a specific need for a product. 5th-II.A.1.b. Observe, identify, and distinguish among plant and animal cell parts 5th-II.B.2.a. Distinguish among roles organisms serve in food webs</p>
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****Note: devices = communication devices with recorded words or sentences****

Goal 2: Students involved in this program will demonstrate an increase in science skills by mastering the objectives.

Objective 2: By May 2007, 80% of the students will activate communication devices to correctly answer at least 15 questions.

Start Date and End Date	Activities to Achieve Objective	Evaluation Data and Measures (evidence of accomplishment)	Relevant Curriculum Standards Science standards
1. Start: Sept 2006 End: May 2007	During each multi-sensory gardening activity, students will answer questions relating to the science concepts. The answers will be included in the students' personal gardening journal, culminating class gardening book, and in the class webpage.	Curriculum-based checklist and teacher observation After teacher evaluates each activity, student will color his/her data graph with hand-over-hand assist. Students will activate the device to correctly answer question.	K-II.A.1.a. Observe and describe how living things change as they grow. K-II.A.3.a. Describe the five senses. K-II.B.1.c. Compare offspring of plants and animals as similar but not identical to their parents and one another. K-III.B.1.b. Name and describe the seasons. K-III.B.1.c. Describe how seasonal changes may affect plants and animals. K-IV.A.2.c. Classify and describe everyday materials that can be recycled. 1 st -IIA.1.a. Investigate and explain that plants require air, water, nutrients, space, and light to survive and reproduce. 1 st -II.A.2.b. Classify edible plant parts as seeds, roots, etc. 1 st -II.A.2.c. Explore and compare methods of seed dispersal. 1 st -II.C.1.a. Classify plants according to their habitats. 1 st -II.C.1.b. Describe characteristics of plants that help them to survive in specific environments. 2 nd -II.A.2.a. Describe the relationship between animals and their habitats. 2 nd -II.c.1.a. Investigate and describe ways in which animals interact with each other and with the environment. 2 nd -III.A.1.a. Define components of weather, including temperature, wind, and precipitation. 2 nd -III.A.1.d. Describe and sequence the seasons. 2 nd -III.A.1.e. Identify safety precautions to use during severe weather conditions.

Goal 2		Objective: 2 continued	
Start Date and End Date	Activities to Achieve Objective	Evaluation Data and Measure evidence of accomplishment	Relevant Curriculum Standards Science standards
1. continued Start: Sept 2006 End: May 2007			<p>2nd-III.A.2.c. Investigate and describe changes in wind direction and the motion of objects due to the wind.</p> <p>3rd-II.A.1.a. Compare and contrast the basic needs of plants and animals.</p> <p>3rd-II.B.1.a. Compare and describe growth of living things based on observations and measurements over time including stages of development and life.</p> <p>3rd-II.C.1.b. Interpret the interdependency of plants and animals within a food chain by defining the following, producer, consumer, decomposer, herbivore, carnivore, omnivore, predator and prey.</p> <p>3rd-II.C.2.a. Describe how habitats and organisms change over time due to many influences</p> <p>3rd-III.A.1.f. Identify that soil provides support and nutrients for plant growth.</p> <p>3rd-IV.B.1.b. Identify and describe simple machines such as lever, pulley, wheel and axle, and inclined plane and apply their uses to real world situations</p> <p>4th-II.A.1.b. Describe the diversity of life forms (vertebrate and invertebrate animals and plants) supported by each environment.</p> <p>4th-II.A.2.b. Analyze specific behaviors influenced by external cues in the environment (e.g. temperature, light, precipitation)</p> <p>4th-II.B.2.a. Describe how organisms may benefit their environment (e.g. earthworms improve the quality of soil, etc.)</p> <p>4th-III.B.2.b. Interpret weather data from a variety of sources.</p> <p>5th-II.B.1.b. Investigate and understand how plants and animals in aquatic/terrestrial ecosystems interact with one another and with the nonliving environment.</p> <p>5th-II.B.2.a. Distinguish among the roles organisms serve in a food web.</p> <p>5th-II.B.4.a. Identify and investigate the abiotic factors in an ecosystem such as quantity of light, air, and water; range of temperature, etc.</p> <p>5th-II.B.4.c. describe the effect of limiting factors such as food, water, space, and shelter on a population.</p> <p>* K-I.A.1.a., 1st-I.A.1.a., 2nd-I.A.1.a., 3rd-I.A.1.a., 4th-I.A.1.a., 5th-I.A.1.a * Use the senses to gather information about objects or events such as size, shape, color, texture, sound, position, and change (qualitative observations)</p>